REMARKS

In the Office Action dated April 15, 2005, claims 19, 22-33 and 36-38 are pending, claims 19, 22-33 and 36 are rejected and claims 37 and 38 are allowed. Applicants appreciate the acknowledgement of patentable subject matter at least in claims 37 and 38. Reconsideration is requested for at least the reasons discussed hereinbelow.

The above amendment is made to claim 19 to avoid the use of the term "controls" in connection with the description of the control circuit because that term appears to be confusing regarding the present invention. The amendment makes it more clear that the bypass circuit is adapted to be switched on and off and that the control circuit senses a voltage in the input channel and switches the bypass circuit dependent upon the voltage in the input channel. This is disclosed in the paragraph bridging pages 13 and 14 of the substitute specification dated May 28, 2004.

The specification is amended to correct a typographical error in the expression "$U70>0.65V_{DD}+|V_{THp}|$" at page 14, line 13 and page 15, line 19, which erroneously contained the symbol "<" instead of the correct symbol ">" prior to this amendment. From the discussion at page 14, line 11 through page 15, line 18, it is clear to one skilled in the art that for U70 "less than" the value, the bypass is switched off. Therefore, the condition for the current flow must be when U70 is "greater than" the value.

Claims 19, 22-33 and 36 are rejected under 35 U.S.C.§103(a) over Meyer, et al. (GB 2,319,128) in view of Yukutake et al. (US 5,523,713).

The Examiner alleges that the "bypass circuit for preventing a current flowing through the first transmission gate from reaching the other input channel, and a second gate" is disclosed by Meyer wherein "the switch 56 acts as a mechanism to

reduce injection currents in the cell and to prevent noise on the channels of the multiplexer." However, Meyer's "bypass circuit" [switch 56] is switched by the same signal (SEL) that controls the transmission state of the transmission gates (58-64). If the transmission gates are conductive (SEL=1), the bypass circuit is switched off or nonconductive. If the transmission gates are nonconductive (SEL=1), the bypass circuit is switched on or conductive. If the bypass circuit is switched on, a current flowing through the bypass circuit depends on the voltage in the input channel. Thus, the state of the Meyer bypass circuit, i.e. whether it is switched on or off, **does not depend on the specific voltage in the input channel**.

The Examiner states that

> In order to generate the select signal, the circuit for generating the select signal must include a monitoring mechanism (sense circuit) for monitoring the input voltage.

However, the monitoring of the input voltage in Meyer need only sense the presence or absence of input voltage. Thus, the state of the Meyer bypass circuit, i.e. whether it is switched on or off, **does not depend on the specific voltage in the input channel** but, instead, on the presence of absence of a voltage.

In accord with the present invention, as claimed in claim 19, the control circuit **senses a voltage in the input channel** *and* **switches said bypass circuit dependent upon said voltage** in the input channel. Accordingly, the bypass circuit (80, 81, 160, 161) is not switched alone by the control signal (SELECT) controlling the transmission state of the transmission gates (FT, ST), but additionally **depending on the specific voltage in the input channel** (e.g. on node IN0 or 70). When the transmission gates are conductive (SELECT=1), the by-pass circuit is switched off or nonconductive. When the transmission gates are nonconductive (SELECT=0), the conducting state of the bypass circuit further **depends on a specific voltage in the input channel**. **When this specific voltage remains within a predetermined range**, the bypass circuit remains switched off or nonconductive. Only when the **voltage in the input channel** exceeds or falls below the **predetermined range**, the bypass circuit is switched on or conductive.

Thus, the node 70, 71 is kept at a high impedance when the **voltage in the input channel** is in its normal range. Thereby, a leakage current through the 1st transmission gate (FT) in the off-state is reduced. This is an important quality criteria (see page 15 second last paragraph).

Only when the voltage becomes too high or too low, the bypass circuit is switched on, thus, preventing a current flow through the second transmission gate that can affect the voltage in the output channel or in another input channel.

Meyer ***fails*** to provide even a hint of a suggestion that the bypass circuit is maintained in a high-impedance or nonconducting state (or switched off or deactivated), when the transmission gates are nonconducting, and only is switched into a low-resistance or conducting state (or switched on or activated) **depending on a specific voltage in the input channel**.

Yukutake also ***fails*** to provide even a hint of a suggestion that the bypass circuit is maintained in a high-impedance or nonconducting state (or switched off or deactivated), when the transmission gates are nonconducting, and only is switched into a low-resistance or conducting state (or switched on or activated) **depending on a voltage in the input channel**.

Thus, it is not seen how the present invention would have been obvious to one of ordinary skill in the art in view of any combination of Meyer and Yukutake.

Represented Claim 21 and the other dependent claims are patentable for at least the same reasons as claim 19.

In view of the amendments and discussion above, it is respectfully submitted that the present application is in condition for allowance. An early reconsideration and notice of allowance are earnestly solicited.

If for any reason a fee is required, a fee paid is inadequate or credit is owed for any

excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

Date: 16 July, 2005

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